

AMENDMENTS TO THE CLAIMS

The following Listing of the Claims will replace all prior versions and all prior listings of the claims in the present application:

1. (Currently amended) A method of identifying an agent that modulates the function of inositol-1, 4 5-triphosphate 3-kinase C (ITPKC), comprising providing a ~~preparation containing~~ cell expressing said ITPKC; incubating the ~~preparation~~ cell with a test agent to be screened under conditions to permit binding of the test agent to ITPKC; determining whether the test agent interacts with ITPKC by detecting the presence or absence of a ~~an apoptotic~~ signal~~[[,]]~~ selected from the group consisting of~~[[:]]~~ caspase activation, DNA fragmentation, cell death, lack of cell proliferation, amount of G1 DNA, change in mitochondrial membrane potential, ~~[[or]]~~ externalization of phosphatidylserine, and ~~the~~ a signal generated from the interaction of the agent with ITPKC, and thereby determining whether the test agent modulates the function of ITPKC.

2. (Canceled)

3. (Currently amended) The method according to claim 1 wherein said signal generated from the interaction of the agent with ITPKC is ~~determining whether the test agent interacts with ITPKC is by detecting~~ a change in the phosphotransferase activity of inositol-1, 4 5-triphosphate 3-kinase C.

4. (Withdrawn) The method according to claim 1 wherein the apoptosis-associated protein that is encoded by a gene selected from Table 1B is a cell surface receptor and the preparation containing said encoded protein comprises a cell expressing said encoded protein on its surface, said protein being associated with a second component capable of providing a detectable signal in response to the binding of an agent to said protein.

5. (Withdrawn) The method according to claim 1 wherein the apoptosis-associated protein that is encoded by a gene selected from Table 1B is a cell surface receptor and the preparation containing said encoded protein comprises a cell expressing said encoded protein on its surface,

said protein being associated with a G-protein in response to the binding of an agent to said protein.

6. (Withdrawn) The method according to claim 1 wherein the apoptosis-associated protein that is encoded by a gene selected from Table 1B is a cell surface receptor and the preparation containing said encoded protein comprises a cell expressing said encoded protein on its surface, said protein being associated with a Gi, Go, Gs, G.sub.16, G.sub.15, Gq or G.sub.12-13 G-protein in response to the binding of an agent to said protein.

7. (Withdrawn) A process for determining whether a chemical compound specifically binds to and inhibits an apoptosis-associated protein that is encoded by a gene selected from Table 1B, which comprises contacting cells producing a second messenger response and expressing the protein that is encoded by a gene selected from Table 1B, wherein such cells do not normally express said protein, with the chemical compound under conditions suitable for inhibition of the protein, and measuring the second messenger response in the presence and in the absence of the chemical compound, a change in the second messenger response in the presence of the chemical compound indicating that the compound inhibits the apoptosis-associated protein that is encoded by a gene selected from Table 1B.

8. (Withdrawn) The process according to claim 7, wherein the second messenger response comprises chloride channel activation, a change in intracellular calcium ion levels, a release of inositol phosphate, a release of arachidonic acid, GTP.gamma.S binding, activation of MAP kinase, cAMP accumulation, a change in intracellular potassium ion levels, or a change in intracellular sodium ion levels.

9. (Withdrawn) The process according to claim 7 wherein the second messenger response is measured by a change in reporter gene activity.

10. (Withdrawn) The process according to claim 7 wherein the second messenger response is measured by a change in reporter gene activity, said reporter gene being selected from secreted alkaline phosphatase, luciferase, and. beta. -galactosidase.

11. (Withdrawn) A method for identifying an agent that inhibits tumor cell proliferation, which comprises determining whether a test agent modulates the activity or expression of a protein that is encoded by a gene selected from Table 1B, and determining whether any agent that modulates said activity or expression is an inhibitor of tumor proliferation.

12. (Withdrawn) The method according to claim 11, wherein the test agent is selected from a low molecular weight organic molecule, an antibody or antibody fragment, an antisense oligonucleotide, a small inhibitory dsRNA, and a ribozyme.

13. (Currently amended) A method of identifying an agent that modulates the function of inositol-1, 4 5-triphosphate 3-kinase C (ITPKC) comprising providing a ~~preparation containing~~ cell expressing said ITPKC; incubating the ~~preparation~~ cell with a test agent to be screened under conditions to permit binding of the test agent to ITPKC, wherein the test agent is selected from the group consisting of low molecular weight organic molecule, an antibody or antibody fragment, an antisense oligonucleotide, a small inhibitory dsRNA, and a ribozyme; determining whether the test agent interacts with ITPKC by detecting the presence or absence of a signal generated from the interaction of the agent with ITPKC, and thereby determining whether the test agent modulates the function of ITPKC.

14. (Currently amended) The method of claim 13, wherein determining whether the test agent interacts with ITPKC is by detecting a 75% change in a signal generated from the interaction of the agent with ITPKC, ~~and thereby determining whether the test agent modulates the function of ITPKC.~~

15. (New) A method of identifying an agent that modulates the function of inositol-1, 4 5-triphosphate 3-kinase C (ITPKC), comprising providing a preparation containing said ITPKC; incubating the preparation with a test agent to be screened under conditions to permit binding of the test agent to ITPKC; determining whether the test agent interacts with ITPKC by detecting the presence or absence of a signal selected from the group consisting of caspase activation and a

signal generated from the interaction of the agent with ITPKC, and thereby determining whether the test agent modulates the function of ITPKC.

16. (New) The method according to claim 15, wherein said signal generated from the interaction of the agent with ITPKC is a change in the phosphotransferase activity of inositol-1, 4 5-triphosphate 3-kinase C.

17. (New) A method of identifying an agent that modulates the function of inositol-1, 4 5-triphosphate 3-kinase C (ITPKC) comprising providing a preparation containing said ITPKC; incubating the preparation with a test agent to be screened under conditions to permit binding of the test agent to ITPKC, wherein the test agent is selected from the group consisting of a low molecular weight organic molecule, an antibody or antibody fragment, an antisense oligonucleotide, a small inhibitory dsRNA, and a ribozyme; determining whether the test agent interacts with ITPKC by detecting the presence or absence of a signal generated from the interaction of the agent with ITPKC, and thereby determining whether the test agent modulates the function of ITPKC.

18. (New) The method of claim 13, wherein determining whether the test agent interacts with ITPKC is by detecting a 75% change in a signal generated from the interaction of the agent with ITPKC.